

Name _____

Math 1
Quiz 14

For all problems, show all work. Do not round. You may use a graphing calculator. If you use graph paper, turn that in with your quiz. Good luck! ☺

For the first three problems, refer to the following information:

A rectangle has the following properties:

- The endpoints of one of its shorter sides of the rectangle are at $(-1, -2)$ and $(-3, 1)$.
- The longer sides of the rectangle are exactly three times as long as the shorter sides.
- The rectangle extends into the first quadrant.

1. (7A) Determine the coordinates of the other two vertices of the rectangle.
2. (C3, 7C) Prove that the figure with vertices at $(-1, -2)$, $(-3, 1)$, and the two vertices you found in the previous problem is indeed a rectangle.
3. (7A) Determine the *exact value* of the perimeter of the rectangle.

4. (7D) Based on the graphs below, determine a formula for g in terms of f .

5. (7D) Based on the graphs below, determine a formula for h in terms of f .

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For all problems, show all work. Do not round. You may use a graphing calculator. If you use graph paper, turn that in with your quiz. Good luck! ☺

For the first three problems, refer to the following information:

A rectangle has the following properties:

- The endpoints of one of its shorter sides of the rectangle are at $(-1, -3)$ and $(-4, 2)$.
- The longer sides of the rectangle are exactly three times as long as the shorter sides.
- The rectangle does not extend into the first quadrant.

1. (7A) Determine the coordinates of the other two vertices of the rectangle.
2. (C3, 7C) Prove that the figure with vertices at $(-1, -3)$, $(-4, 2)$, and the two vertices you found in the previous problem is indeed a rectangle.
3. (7A) Determine the *exact value* of the perimeter of the rectangle.

4. (7D) Based on the graphs below, determine a formula for g in terms of f .

5. (7D) Based on the graphs below, determine a formula for h in terms of f .